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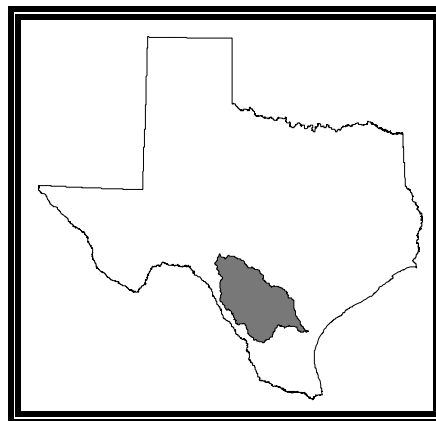
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## Basin 21

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### Nueces River



## **Nueces River Basin Narrative Summary**

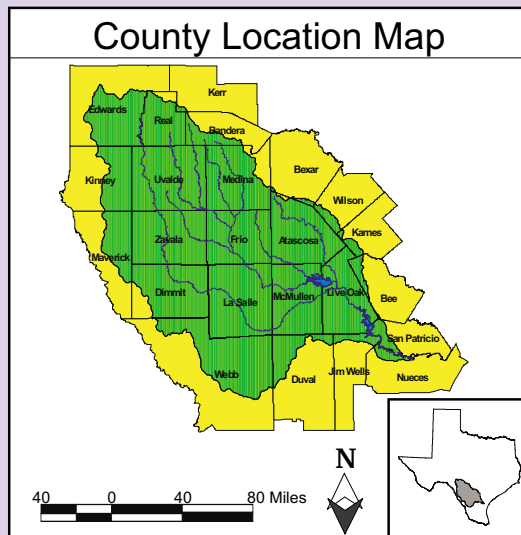
The Nueces River originates in Edwards County and flows approximately 315 miles to Nueces Bay in the Gulf of Mexico near Corpus Christi. The total basin drainage area is 16,950 square miles. Principal tributaries to the Nueces include the Atascosa River, the Frio River, and its tributaries (San Miguel Creek, Hondo Creek, Sabinal River and Leona River). The Atascosa and Frio Rivers join the Nueces River above Lake Corpus Christi. The economy of the basin is based on agricultural and mineral production. The Nueces River Basin contains the extensively irrigated agriculture area near Crystal City known as the Winter Garden.

For monitoring purposes, the Nueces River Basin has been divided into 17 segments, consisting of 1,084 stream miles, and two major reservoirs covering 47,891 surface acres. There are 41 active surface water monitoring stations in the basin, which are monitored by the TNRCC, the USGS, or the city of Corpus Christi.

Water quality in the upper portion of the basin in the less inhabited reaches is good, except for relatively high nitrate nitrogen concentrations occurring naturally in the spring-fed streams. A substantial part of the flow of the Nueces River and its tributaries enters the fractured and cavernous limestone formation of the Edwards Aquifer Balcones Fault Zone. As a result, stream flows in the Nueces River Basin downstream from the recharge zone consist almost entirely of stormwater. During low-flow conditions, chloride, sulfate, and total dissolved solid levels increase due to natural and man-made activities. Dissolved oxygen concentrations in the upper Nueces, Frio and Atascosa Rivers are sometimes lower than the criterion established to assure optimum conditions for aquatic life.

The Atascosa River experiences elevated fecal coliform densities, and inorganic nitrogen and phosphorus concentrations downstream of the city of Pleasanton. Elevated fecal coliform densities are also occasionally found in the upper portion of Choke Canyon Reservoir and the lower Sabinal River.

# Nueces River Basin Identified Water Quality Issues





# Nueces River Basin Graphical Summary

Basin Map	Water Bodies									
	Segment 2101 Nueces River Tidal	Segment 2102 Nueces River Below Lake Corpus Christi	Segment 2103 Lake Corpus Christi	Segment 2104 Nueces River Above Frio River	Segment 2105 Nueces River Above Holland Dam	Segment 2106 Nueces/Lower Frio River	Segment 2107 Atascosa River	Segment 2108 San Miguel Creek	Segment 2109 Leona River	Segment 2110 Lower Sabinal River
<b>DESIGNATED USE SUPPORT</b>										
Contact Recreation	S	NA	NA	S	NA	S	N	NA	S	N
Noncontact Recreation	X	X	X	X	X	X	X	X	X	X
Public Water Supply	X	S	S	S	S	S	S	S	S	S
<b>Fish Consumption</b>										
Human Health	NA	NA	NA	NA	NA	S	NA	NA	NA	NA
Advisories/Closures	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Aquatic Life</b>										
Dissolved Oxygen (Grab)	S	S	NA	P	NA	S	N	NA	S	S
Dissolved Oxygen (24-Hour)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals in Water	NA	NA	NA	NA	NA	S	NA	NA	NA	NA
Organics in Water	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Macrobenthos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>GENERAL USE SUPPORT</b>										
Water Temperature	S	S	NA	S	NA	S	S	NA	S	S
pH	S	S	NA	P	NA	S	S	NA	S	S
Chloride	S	S	NA	S	NA	S	S	NA	S	S
Sulfate	S	S	NA	S	NA	S	S	NA	S	S
Total Dissolved Solids	S	S	NA	S	NA	S	S	NA	S	S

S = Support; P = Partial Support; N = Nonsupport; T = Threatened; NC = No Concern; C = Concern;  
NA = Not Assessed; X = Not Applicable

### Nueces River Basin Graphical Summary (Continued)

Basin Map	Water Bodies									
	Segment 2101 Nueces River Tidal	Segment 2102 Nueces River Below Lake Corpus Christi	Segment 2103 Lake Corpus Christi	Segment 2104 Nueces River Above Frio River	Segment 2105 Nueces River Above Holland Dam	Segment 2106 Nueces/Lower Frio River	Segment 2107 Atascosa River	Segment 2108 San Miguel Creek	Segment 2109 Leona River	Segment 2110 Lower Sabinal River
<b>WATER QUALITY CONCERNS</b>										
Contact Recreation	X	NA	NA	X	NA	X	X	NA	X	X
Noncontact Recreation	X	X	X	X	X	X	X	X	X	X
Fish Tissue	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Narrative	NC	NC	NA	NC	NC	NC	NC	NC	NC	NC
<b>Nutrient Enrichment</b>										
Ammonia Nitrogen	NC	NC	NA	NC	NA	NA	C	NA	NC	NC
Nitrite + Nitrate Nitrogen	NC	NA	NA	NA	NA	NA	C	NA	NA	C
Orthophosphorus	NC	NA	NA	NA	NA	NC	C	NA	NA	NC
Total Phosphorus	NC	NA	NA	NC	NA	NC	C	NA	NC	NC
Chlorophyll <i>a</i>	C	NC	NA	NC	NA	NA	NC	NA	NC	NA
<b>Public Water Supply</b>										
Finished Water Chloride	X	NC	NC	NC	NC	NC	NC	NC	NC	NC
Finished Water Sulfate	X	NC	NC	NC	NC	NC	NC	NC	NC	NC
Finished Water TDS	X	NC	NC	NC	NC	NC	NC	NC	NC	NC
Surface Water Chloride	X	NC	NA	NC	NA	NC	NC	NA	NC	NC
Surface Water Sulfate	X	NC	NA	NC	NA	NC	NC	NA	NC	NC
Surface Water TDS	X	NC	NA	NC	NA	NC	C	NA	NC	NC
<b>Aquatic Life</b>										
Dissolved Oxygen	X	X	NA	X	NA	X	X	NA	X	X
Metals in Water	NA	NA	NA	NA	NA	X	NA	NA	NA	NA
Organics in Water	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

# Nueces River Basin Graphical Summary

Basin Map	Water Bodies									
	Segment 2111 Upper Sabinal River	Segment 2112 Upper Nueces River	Segment 2113 Upper Frio River	Segment 2114 Hondo Creek	Segment 2115 Seco Creek	Segment 2116 Choke Canyon Reservoir	Segment 2117 Frio River Above Choke Canyon Reservoir			
<b>DESIGNATED USE SUPPORT</b>										
Contact Recreation	S	S	NA	NA	NA	NA	N			
Noncontact Recreation	X	X	X	X	X	X	X			
Public Water Supply	S	S	S	S	S	S	S			
<b>Fish Consumption</b>										
Human Health	NA	NA	NA	NA	S	NA	NA			
Advisories/Closures	NA	NA	NA	NA	NA	NA	NA			
<b>Aquatic Life</b>										
Dissolved Oxygen (Grab)	S	S	P	NA	S	NA	P			
Dissolved Oxygen (24-Hour)	NA	NA	NA	NA	NA	NA	NA			
Metals in Water	NA	NA	NA	NA	S	NA	NA			
Organics in Water	NA	NA	NA	NA	NA	NA	NA			
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA			
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA			
Macrobenthos	NA	NA	NA	NA	NA	NA	NA			
Fish	NA	NA	NA	NA	NA	NA	NA			
<b>GENERAL USE SUPPORT</b>										
Water Temperature	S	S	S	NA	S	NA	S			
pH	S	S	S	NA	S	NA	S			
Chloride	S	S	S	NA	S	NA	S			
Sulfate	S	S	S	NA	S	NA	S			
Total Dissolved Solids	S	S	S	NA	S	NA	S			

S = Support; P = Partial Support; N = Nonsupport; T = Threatened; NC = No Concern; C = Concern;  
NA = Not Assessed; X = Not Applicable



### Nueces River Basin Graphical Summary (Continued)

Basin Map	Water Bodies									
	Segment 2111 Upper Sabinal River	Segment 2112 Upper Nueces River	Segment 2113 Upper Frio River	Segment 2114 Hondo Creek	Segment 2115 Seco Creek	Segment 2116 Choke Canyon Reservoir	Segment 2117 Frio River Above Choke Canyon Reservoir			
<b>WATER QUALITY CONCERNS</b>										
Contact Recreation	X	X	NA	NA	NA	X	X			
Noncontact Recreation	X	X	X	X	X	X	X			
Fish Tissue	NA	NA	NA	NA	NA	NA	NA			
Sediment	NA	NA	NA	NA	NA	NA	NA			
Narrative	NC	NC	NC	NC	NC	NC	NC			
<b>Nutrient Enrichment</b>										
Ammonia Nitrogen	NC	NC	NC	NA	NA	NA	NC			
Nitrite + Nitrate Nitrogen	NC	NA	NC	NA	NA	NA	C			
Orthophosphorus	NC	NA	NC	NA	NC	NA	NC			
Total Phosphorus	NC	NC	NC	NA	NA	NA	NC			
Chlorophyll <i>a</i>	NC	NC	NA	NA	NA	NA	NC			
<b>Public Water Supply</b>										
Finished Water Chloride	NC	NC	NC	NC	NC	NC	NC			
Finished Water Sulfate	NC	NC	NC	NC	NC	NC	NC			
Finished Water TDS	NC	NC	NC	NC	NC	NC	NC			
Surface Water Chloride	NC	NC	NC	NA	NC	NA	NC			
Surface Water Sulfate	NC	NC	NC	NA	NC	NA	NC			
Surface Water TDS	NC	NC	NC	NA	NC	NA	NC			
<b>Aquatic Life</b>										
Dissolved Oxygen	X	X	X	NA	X	NA	X			
Metals in Water	NA	NA	NA	NA	NA	X	NA			
Organics in Water	NA	NA	NA	NA	NA	NA	NA			
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA			
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA			

# Nueces River Basin

## Segment 2101 - Nueces River Tidal

**Water body description:** From the confluence with Nueces Bay in Nueces County to Calallen Dam 1.7 km (1.1 miles) upstream of US 77/IH 37 in Nueces/San Patricio County

**Water body classification:** Classified

**Water body type:** Tidal Stream

**Water body length / area:** 12.00 Miles

**Use support summary:** Available data indicate that the aquatic life, contact recreation, and general uses are supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Chlorophyll *a* is a concern.

### Monitoring sites used in the assessment

Station	Station Description
12960	Nueces River Tidal north of Viola turning basin

### Published studies

Publication	Date	Author
IMS 53 Nueces River Tidal	April 1975	Bowman/Jensen D.

### Wastewater dischargers

Permit type	Number of outfalls
Domestic	4
Industrial	2

### Historical fish kills

Start date	Location	Fish killed	Suspected cause
08/01/1998	Nueces River - from Violet Road boat ramp to railroad tressel downstream	85	Low Dissolved Oxygen

## Nueces River Basin

### Segment 2102 - Nueces River Below Lake Corpus Christi

**Water body description:** From Calallen Dam 1.7 km (1.1 miles) upstream of US 77/IH 37 in Nueces/San Patricio County to Wesley E. Seale Dam in Jim Wells/San Patricio County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 35.00 Miles

**Use support summary:** Available data indicate that the aquatic life, public water supply, and general uses are supported. The fish consumption and contact recreation uses were not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

#### Monitoring sites used in the assessment

Station	Station Description
12962	Nueces River intake at Corpus Christi Cunningham water treatment plant
12964	Nueces River at Bluntzer Bridge on FM 666
12965	Nueces River at La Fruta Bridge, SH 359

#### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	12
Domestic	6
Industrial	1

## Nueces River Basin

### Segment 2103 - Lake Corpus Christi

**Water body description:** From Wesley E. Seale Dam in Jim Wells/San Patricio County to a point 100 meters (110 yards) upstream of US 59 in Live Oak County, up to normal pool elevation of 94 feet (impounds Nueces River)

**Water body classification:** Classified

**Water body type:** Reservoir

**Water body length / area:** 21,900 Acres

**Use support summary:** Available data indicate that the public water supply use is supported. Other uses were not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no concerns for finished drinking water. Other water quality concerns were not assessed due to insufficient data.

#### Monitoring sites used in the assessment

Station	Station Description
12971	Lake Corpus Christi at FM 534 east of Dinero

#### Published studies

Publication	Date	Author
IMS 29 Lake Corpus Christi	May 1974	Twidwell, S.

#### Wastewater dischargers

Permit type	Number of outfalls
Domestic	10
Industrial	1

### Historical fish kills

Start date	Location	Fish killed	Suspected cause
09/25/1995	Lake Corpus Christi	5	Low Dissolved Oxygen
05/18/1998	Alice Terminal Reservoir (Lake Alice) North of Alice	378	Low Dissolved Oxygen

## Nueces River Basin

### Segment 2104 - Nueces River Above Frio River

**Water body description:** From the confluence of the Frio River in Live Oak County to Holland Dam in LaSalle County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 105. Miles

**Use support summary:** The aquatic life use is partially supported due to depressed dissolved oxygen concentrations. General uses are partially supported due to elevated pH values. The public water supply use is supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

**Additional information:** A project is underway for dissolved oxygen to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

A project is scheduled for pH to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

### Monitoring sites used in the assessment

Station	Station Description
12973	Nueces River at SH 16 south of Tilden

### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	5
Domestic	1

## Nueces River Basin

### Segment 2105 - Nueces River Above Holland Dam

**Water body description:** From Holland Dam in LaSalle County to a point 100 meters (110 yards) upstream of FM 1025 in Zavala County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 100.00 Miles

**Use support summary:** Available data indicate that the public water supply use is supported. Other uses were not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no public water supply concerns. Other water quality concerns were not assessed due to insufficient data.

#### Monitoring sites used in the assessment

Station	Station Description
12975	Nueces River at IH 35 south of Cotulla

#### Published studies

Publication	Date	Author
IMS 74 Nueces River	July 1977	DelaCruz, A. (Region 13)

#### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	5
Domestic	16
Industrial	2



## Nueces River Basin

### Segment 2106 - Nueces/Lower Frio River

**Water body description:** From a point 100 meters (110 yards) upstream of US 59 in Live Oak County to Choke Canyon Dam in Live Oak County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 27.00 Miles

**Use support summary:** Available data indicate that all uses are supported.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

#### Monitoring sites used in the assessment

Station	Station Description
12977	Nueces River at Three Rivers Dam near US 72
12978	Nueces River at US 59 east of George West
12979	Nueces River Bridge on US 281 south of Three Rivers

#### Wastewater dischargers

Permit type	Number of outfalls
Domestic	1
Industrial	3

## Nueces River Basin

### Segment 2107 - Atascosa River

**Water body description:** From the confluence with the Frio River in Live Oak County to the confluence of the West Prong Atascosa River and the North Prong Atascosa River in Atascosa County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 103.00 Miles

**Use support summary:** The aquatic life use is not supported due to depressed dissolved oxygen concentrations in a 25 mile reach downstream of SH 16. The contact recreation use is not supported within this same reach due to elevated fecal coliform densities. The public water supply and general uses are supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Ammonia nitrogen, nitrite + nitrate nitrogen, orthophosphorus, and total phosphorus are concerns in a 25-mile reach downstream of SH 16. Total dissolved solids in surface water is a public water supply concern.

**Additional information:** A project is underway for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

### Monitoring sites used in the assessment

Station	Station Description
12980	Atascosa River at FM 99 Bridge west of Whitsett
12981	Atascosa River on dirt road directly east of Pleasanton at railroad bridge
12982	Atascosa River at US 281 at Pleasanton

### Published studies

Publication	Date	Author
LP 94 Atascosa River	Apr. 1979	Ottmers, D.

### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	10
Domestic	7
Industrial	14

### Historical fish kills

Start date	Location	Fish killed	Suspected cause
08/18/1995	West Prong Atascosa Creek	100	Low Dissolved Oxygen

## Nueces River Basin

### Segment 2108 - San Miguel Creek

**Water body description:** From a point immediately upstream of the confluence of Mustang Branch in McMullen County to the confluence of San Francisco Perez Creek and Chacon Creek in Frio County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 66.00 Miles

**Use support summary:** Available data indicate that the public water supply use is supported. Other uses were not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no public water supply concerns. Other water quality concerns were not assessed due to insufficient data.

#### Monitoring sites used in the assessment

Station	Station Description
12983	San Miguel Creek at SH 16 north of Tilden

#### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	11
Domestic	3
Industrial	1

## Nueces River Basin

### Segment 2109 - Leona River

**Water body description:** From the confluence with the Frio River in Frio County to US 83 in Uvalde County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 85.00 Miles

**Use support summary:** Available data indicate that the aquatic life, public water supply, contact recreation, and general uses are supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

#### Monitoring sites used in the assessment

Station	Station Description
12985	Leona River at FM 1581 southwest of Pearsall
12987	Leona River at US 57 near Batesville

#### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	7
Domestic	6
Industrial	2

#### Historical fish kills

Start date	Location	Fish killed	Suspected cause
08/23/1995	Leona River	247	Low Dissolved Oxygen

## Nueces River Basin

### Segment 2110 - Lower Sabinal River

**Water body description:** From the confluence with the Frio River in Frio County to Uvalde County to a point 100 meters (110 yards) upstream of SH 127 in Uvalde County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 27.00 Miles

**Use support summary:** The contact recreation use is not supported due to elevated fecal coliform densities. The aquatic life, public water supply and general uses are supported. The fish consumption uses was not assessed due to insufficient data.

**Water quality concerns summary:** Nitrate + nitrite nitrogen is a concern.

**Additional information:** A project is underway for fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
12993	Sabinal River Bridge at US 90 west of Sabinal
14254	Sabinal River at FM 187 south of Sabinal

#### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	3
Domestic	4

## Nueces River Basin

### Segment 2111 - Upper Sabinal River

**Water body description:** From a point 100 meters (110 yards) upstream of SH 127 in Uvalde County to the most upstream crossing of FM 187 in Bandera County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 48.00 Miles

**Use support summary:** Available data indicate that aquatic life, contact recreation, public water supply and general uses are supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

#### Monitoring sites used in the assessment

Station	Station Description
12994	Sabinal River 12.5 miles North of Sabinal and 2.3 miles downstream from the mouth of Onion Creek
14939	Sabinal River at FM 187, 5.6 mi. south of Vanderpool

#### Wastewater dischargers

Permit type	Number of outfalls
Domestic	2
Industrial	1

## Nueces River Basin

### Segment 2112 - Upper Nueces River

**Water body description:** From a point 100 meters (110 yards) upstream of FM 1025 in Zavala County to the confluence of the East Prong Nueces River and Hackberry Creek in Edwards County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 123.00 Miles

**Use support summary:** Available data indicate that the aquatic life, contact recreation, public water supply, and general uses are supported in the lower 25 miles. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

#### Monitoring sites used in the assessment

Station	Station Description
12996	Nueces River US 57 south of Uvalde
12999	Nueces River 1 mile northeast of Laguna and 0.5 miles downstream from Sycamore Creek
14253	Nueces River at FM 481 SW of Uvalde



## Nueces River Basin

### Segment 2113 - Upper Frio River

**Water body description:** From a point 100 meters (110 yards) upstream of US 90 in Uvalde County to the confluence of the West Frio River and the East Frio River in Real County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 47.00 Miles

**Use support summary:** The aquatic life use is partially supported due to depressed dissolved oxygen concentrations in the lower 25 miles. The public water supply and general uses are supported. The contact recreation and fish consumption uses were not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

**Additional information:** A project is underway for dissolved oxygen to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
13006	Frio River at SH 127 east of Concan
13007	Frio River at Magers Crossing
13008	Frio River at Garner State Park Dam
15751	East Frio River at Birchfield approx. 800 ft. upstream of Steep Hollow Creek confluence, 11 mi. NE of Leakey
15752	Frio River at Jake's Hole approx. 1000 ft. downstream of FM 1120, 6.5 mi. south of Leakey

### Wastewater dischargers

Permit type	Number of outfalls
Domestic	2

## Nueces River Basin

### Segment 2114 - Hondo Creek

**Water body description:** From the confluence with the Frio River in Frio County to FM 470 in Bandera County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 78.00 Miles

**Use support summary:** Available data indicate that the public water supply use is supported. Other uses were not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no public water supply concerns for finished drinking water. Other water quality concerns were not assessed due to insufficient data.

#### Monitoring sites used in the assessment

Station	Station Description
13010	Hondo Creek downstream from bridge on RR 462 near Tarpley

#### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	1
Domestic	1
Industrial	1

## Nueces River Basin

### Segment 2115 - Seco Creek

**Water body description:** From the confluence with Hondo Creek in Frio County to West Seco Creek in Bandera County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 70.00 Miles

**Use support summary:** Available data indicate that the aquatic life, fish consumption, and general uses are supported in the upper 25 miles. The public water supply use is supported. The contact recreation use was not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

#### Monitoring sites used in the assessment

Station	Station Description
13013	Seco Creek at Miller Ranch near Utopia

#### Wastewater dischargers

Permit type	Number of outfalls
Domestic	1

## Nueces River Basin

### Segment 2116 - Choke Canyon Reservoir

**Water body description:** From Choke Canyon Dam in Live Oak County to a point 4.2 km (2.6 miles) downstream of SH 16 on the Frio River Arm in McMullen County and to a point 100 meters (110 yards) upstream of the confluence of Mustang Branch on the San Miguel Creek Arm in McMullen County, up to normal pool elevation of 220.5 feet (impounds Frio River)

**Water body classification:** Classified

**Water body type:** Reservoir

**Water body length / area:** 26,000 Acres

**Use support summary:** The public water supply use is supported. Other uses were not assessed due to insufficient data. Choke Canyon Reservoir is on the 2000 303(d) list for elevated fecal coliform densities based on an assessment performed in 1996.

**Water quality concerns summary:** Available data indicate that there are no public water supply concerns for finished drinking water. Other concerns were not assessed due to insufficient data.

**Additional information:** A project is scheduled for fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Wastewater dischargers

Permit type	Number of outfalls
Domestic	3

### Historical fish kills

Start date	Location	Fish killed	Suspected cause
09/20/1998	Choke Canyon Lake-North Shore boat ramp	60	Physical Damage/Trauma

## Nueces River Basin

### Segment 2117 - Frio River Above Choke Canyon Reservoir

**Water body description:** From a point 4.2 km (2.6 miles) downstream of SH 16 in McMullen County to a point 100 meters (110 yards) upstream of US 90 in Uvalde County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 158.00 Miles

**Use support summary:** The aquatic life use is partially supported due to depressed dissolved oxygen concentrations in the lower 75-mile reach from FM 1581 in Frio County to the downstream segment boundary. The contact recreation use is not supported due to elevated fecal coliform densities in a 50 mile reach 5 miles from east of Fowlerton in McMullen County to FM 1581 in Frio County. The public water supply and general uses are supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Nitrate + nitrite nitrogen is a concern in a 25-mile reach at the LaSalle and Frio county lines.

**Additional information:** Projects are scheduled for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

### Monitoring sites used in the assessment

Station	Station Description
13023	Frio River at SH 16 in Tilden
13024	Frio River at IH 35 north of Dilley
15448	Frio River at La Salle CR, 5 mi. north of SH 97 and 5 mi. east of FM 469, 6 mi. NE of Los Angeles
15449	Frio River at FM 187, 8 mi. south of Sabinal
15637	Frio River at end of private road 0.6 km NW of Fowlerton and 1.1 km upstream of SH 97

### Wastewater dischargers

Permit type	Number of outfalls
Domestic	6

### Historical fish kills

Start date	Location	Fish killed	Suspected cause
05/06/1997	Frio R. 20 mi downstream of HWY 85 to Tilden	23,200	Low Dissolved Oxygen



